

I Claim:

1. Apparatus for applying a material to a substrate, comprising:
a housing having an inlet passage, a plurality of exit openings and a recess in fluid
5 communication between the inlet passage and the exit openings;
a valve element disposed in the recess, the valve element having a first portion and
a second portion axially displaced from the first portion; and
means for moving the valve element in the recess;
wherein the first portion provides continuous fluid communication between the
10 inlet passage and one of the exit openings during movement of the valve element and the
second portion provides intermittent fluid communication between the inlet passage and
another of the exit openings during movement of the valve element.
2. The apparatus of claim 1, wherein the moving means rotates the valve
15 element in the recess.
3. The apparatus of claim 2, wherein the first portion comprises a reduced
diameter section of the valve element.
- 20 4. The apparatus of claim 3, wherein the second portion comprises an
apertured section of the valve element.
5. The apparatus of claim 1, wherein the valve element is journaled for
rotation in the recess and is restrained against axial movement therein.
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6. The apparatus of claim 1, wherein the moving means axially reciprocates
the valve element in the recess.

7. The apparatus of claim 6, wherein the valve element includes lands and grooves that move into and out of alignment with the exit openings as the valve element is axially reciprocated.

8. A method of applying a material to a substrate, the method comprising the steps of:

providing a housing having an inlet passage, a plurality of exit openings, a recess in fluid communication between the inlet passage and the exit openings, and a valve element disposed in the recess, the valve element having a first portion and a second portion axially displaced from the first portion;

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providing material to the inlet passage under pressure; and

moving the valve element in the recess wherein the first portion permits continuous flow of the material between the inlet passage and one of the exit openings during movement of the valve element and the second portion permits intermittent fluid communication between the inlet passage and another of the exit openings during movement of the valve element such that continuous and intermittent flows of material exit the housing and are directed toward the substrate; and

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moving the substrate as the material is directed thereto so that the material is deposited as continuous and intermittent lines of material thereon.

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9. The method of claim 8, wherein the step of moving the valve element comprises the step of rotating the valve element.

10. The method of claim 8, wherein the step of moving the valve element comprises the step of reciprocating the valve element.

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11. An apparatus for applying an adhesive to a substrate, comprising:
a housing having an inlet passage, a plurality of dispensing passages with exit
openings, and a recess in fluid communication between the inlet passage and the exit
openings;

5 a rotatable valve element disposed in the recess, the valve element having a
plurality of apertured sections each aligned with a dispensing passage.

12. The apparatus of claim 11, wherein each of the plurality of apertured
sections of the valve element is circumferentially offset with respect to adjacent apertured
10 sections.

13. The apparatus of claim 12, wherein each of the plurality of apertured
sections of the valve element is circumferentially offset by about 90° with respect to
adjacent apertured sections.

15 14. The apparatus of claim 11, wherein the number of apertured sections is
equal to the number of dispensing passages.

20 15. The apparatus of claim 11, wherein the valve element further includes at
least one first portion aligned with a dispensing passage, the first portion allowing
continuous passage of the adhesive through the dispensing passage.

16. An apparatus for applying an adhesive to a substrate, comprising:
a housing having an inlet passage, a plurality of exit openings, and a recess in fluid
communication between the inlet passage and the exit openings;
an axially reciprocating valve element in the recess, the valve element including a
5 plurality of lands and grooves that move into and out of alignment with at least one of the
dispensing passages as the valve element axially reciprocates.

17. The apparatus of claim 15 wherein the plurality of lands and grooves
moves in and out of alignment with fewer than all of the dispensing passages as the valve
10 element axially reciprocates.